

Operating Instructions
for
Rotor Flow Indicator for Fluids

Model: DAH



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2. Note

Please read these operating instructions before unpacking and putting the unit into operation. Follow the instructions precisely as described herein.

The instruction manuals on our website www.kobold.com are always for currently manufactured version of our products. Due to technical changes, the instruction manuals available online may not always correspond to the product version you have purchased. If you need an instruction manual that corresponds to the purchased product version, you can request it from us free of charge by email (info.de@kobold.com) in PDF format, specifying the relevant invoice number and serial number. If you wish, the operating instructions can also be sent to you by post in paper form against an applicable postage fee.

The devices are only to be used, maintained and serviced by persons familiar with these operating instructions and in accordance with local regulations applying to Health & Safety and prevention of accidents.

When used in machines, the measuring unit should be used only when the machines fulfil the EC-machine guidelines.

as per PED 2014/68/EU

In acc. with Article 4 Paragraph (3), "Sound Engineering Practice", of the PED 2014/68/EU no CE mark.

Diagram 8, Pipe, Group 1 dangerous fluids

3. Instrument Inspection

Instruments are inspected before shipping and sent out in perfect condition.

Should damage to a device be visible, we recommend a thorough inspection of the delivery packaging. In case of damage, please inform your parcel service / forwarding agent immediately, since they are responsible for damages during transit.

Scope of delivery:

The standard delivery includes:

- Rotor Flow Indicator model: DAH

4. Regulation Use

Any use of the Rotor Flow Indicator DAH, which exceeds the manufacturers specification may invalidate its warranty. Therefore, any resulting damage is not the responsibility of the manufacturer. The user assumes all risk for such usage.

5. Operating Principle

The Kobold Rotor Flow Indicators DAH can be installed in pipe work for fluids. These instruments have female thread on both sides and are available in brass or stainless steel.

6. Mechanical Connection

6.1 Before Mounting

Be sure the maximum allowable working pressures or temperatures specified for the instrument are not exceeded. (see 9 Order Codes)

6.2 Installation

Install the Rotor Flow Indicator DAH in the direction of flow (as per stamped arrow)



Attention: Suddenly opening the inflow may cause pressure peaks exceeding the working pressure of the instrument; this may result in water hammer, causing the instrument glass to break.



Attention: Remove any coarse foreign material before installing the instrument in the pipe.

To install the indicator, always apply the open-ended spanner to the hexagon flats on the side to which the connecting pipe is to be screwed on.



Attention: Applying the spanner on the opposite hexagon may cause the internal support bars to be sheared off, or the connection nut to be twisted.

During installation, protect the inspection glass against external damage (Attention: hard glass)!



Attention: Be sure to avoid deforming the indicator by improper fastening during installation.

7. Maintenance

7.1 General

If the measuring medium is clean and uncontaminated, you do not have to maintain the Flow Indicator DAH.

If a cleaning is required, the flow indicator must be dismantled. Then take an adequate cloth and a standard glass cleaning agent and clean the inspection glass carefully.

7.2 Replacing the measuring glass



Attention! The upper and lower sections of the DAH Flow Indicator are attached with screw sealing lacquer. Be sure to remove the upper section from the lower section while warm only.

- Fix the lower hexagon of the Flow Indicator ("PN16" marking).
- Heat the upper section with a hot-air dryer (specifically in the area of the connecting bars) until the upper section can be removed using an appropriate open-jawed spanner without applying much force.
- Remove the broken glass and clean the connecting threads of the upper and lower sections using a wire brush.
- Replace the O-rings and the wiper rubbers, and slip the new, moistened measuring glass onto the lower section.
- Apply some releasable screw sealing lacquer (such as Weicon no. 302-42) onto the connecting threads, and carefully screw the upper section onto the lower section.
- Having tightened the said components, align the spanner surfaces in parallel.

8. Technical Information

Materials

Housing:	Brass nickel plated (DAH-x1..) St. st. 1.4305 (DAH-x2..)
Inlet:	Brass nickel plated (DAH-x1..) St. st. 1.4305 (DAH-x2..)
Sight glass:	Duran
O-rings:	NBR (DAH-x1..) FPM (DAH-x2..)
Rotor:	POM (DAH-x1..) Hostafion (DAH-x2..)
Rotor axle:	St. st. 1.4305

9. Order Codes

Flow indicator with rotor

Order details (Example: DAH-1101H R08)

DN	Indication range	Δp at Q_{max}	p_{max}	t_{max}	Weight	Model		Connection thread	
						Brass w/rotor	St.st. w/rotor	G	NPT
	L/min water	bar	PN	°C	Kg				
1/4"	0.4 – 4	0.25	16	100	0.3	DAH-1101H..	DAH-1201H..	R08	N08
3/8"	0.6 – 8	0.25	16	100	0.28	DAH-1102H..	DAH-1202H..	R10	N10
1/2"	1 – 12	0.25	16	100	0.6	DAH-1103H..	DAH-1203H..	R15	N15
3/4"	1 – 25	0.25	16	100	0.65	DAH-1104H..	DAH-1204H..	R20	N20
1"	1.6 – 40	0.25	16	100	0.7	DAH-1105H..	DAH-1205H..	R25	N25
1 1/4"	8 – 80	0.25	16	100	1.5	DAH-1106H..	DAH-1206H..	R32	N32
1 1/2"	8 - 100	0.25	16	100	1.6	DAH-1107H..	DAH-1207H..	R40	N40

Flow indicator without rotor

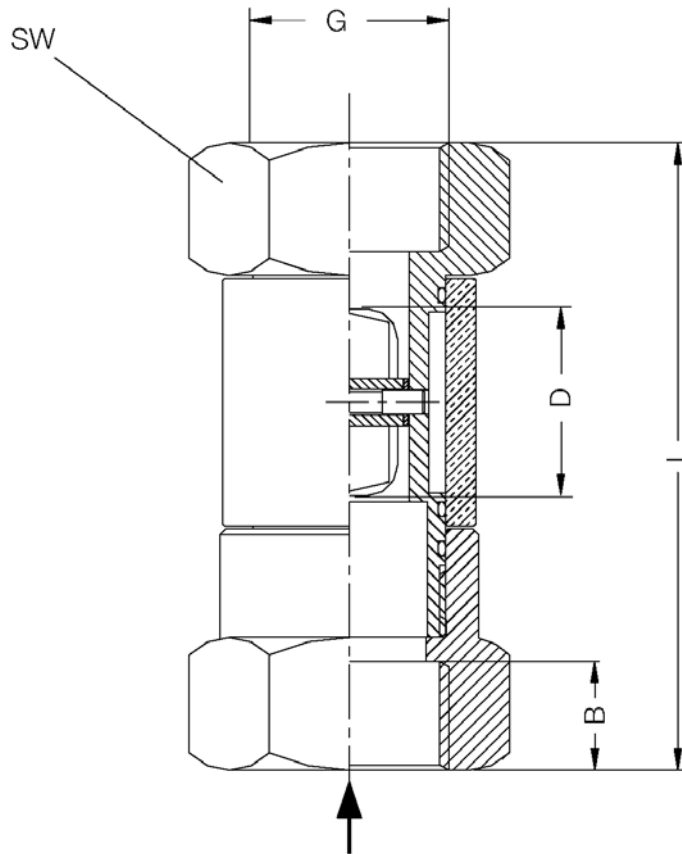
Order details (Example: DAH-2201H R08)

DN	Q_N	Δp at Q_N	p_{max}	t_{max}	Weight	Model		Connection thread	
						Nickel pl. brass without rotor	St.st. without rotor	G	NPT
	L/min	bar	PN	°C	Kg				
1/4"	8.3	0.2	16	100*/180**	0.3	DAH-2101H..	DAH-2201H..	R08	N08
3/8"	11.1	0.2	16	100*/180**	0.28	DAH-2102H..	DAH-2202H..	R10	N10
1/2"	31.5	0.2	16	100*/180**	0.57	DAH-2103H..	DAH-2203H..	R15	N15
3/4"	38.0	0.2	16	100*/180**	0.62	DAH-2104H..	DAH-2204H..	R20	N20
1"	36.5	0.2	16	100*/180**	0.65	DAH-2105H..	DAH-2205H..	R25	N25
1 1/4"	125	0.2	16	100*/180**	1.5	DAH-2106H..	DAH-2206H..	R32	N32
1 1/2"	125	0.2	16	100*/180**	1.6	DAH-2107H..	DAH-2207H..	R40	N40

* DAH-21 t_{max} 100 °C

* DAH-22 t_{max} 180 °C

10. Dimensions



	Standard Size DN	Female thread G	Female Thread NPT	Thread length B DIN 3852	Total length L	Spanner size SW
	DN mm	G	NPT	B mm	L mm	SW mm
DAH-...01H	8	1/4	1/4"	12	71	36
DAH-...02H	10	3/8	3/8"	12	71	36
DAH-...03H	15	1/2	1/2"	14	86	46
DAH-...04H	20	3/4	3/4"	16	94	46
DAH-...05H	25	1	1"	18	104	46
DAH-...06H	32	1 1/4	1 1/4"	20	120	65
DAH-...07H	40	1 1/2	1 1/2"	22	130	65

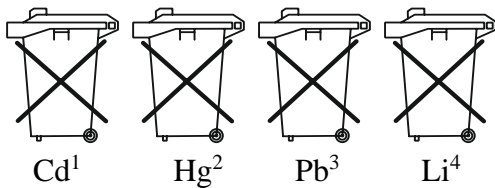
11. Disposal

Note!

- Avoid environmental damage caused by media-contaminated parts
- Dispose of the device and packaging in an environmentally friendly manner
- Comply with applicable national and international disposal regulations and environmental regulations.

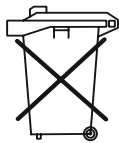
Batteries

Batteries containing pollutants are marked with a sign consisting of a crossed-out garbage can and the chemical symbol (Cd, Hg, Li or Pb) of the heavy metal that is decisive for the classification as containing pollutants:



1. „Cd" stands for cadmium
2. „Hg" stands for mercury
3. „Pb" stands for lead
4. „Li" stands for lithium

Electrical and electronic equipment



12. EU Declaration of Conformance

We, KOBOLD Messring GmbH, Hofheim-Ts, Germany, declare under our sole responsibility that the product:

Rotor Flow Indicator for Fluids

Model: DAH-...

to which this declaration relates is in conformity with the standards noted below:

EN IEC 63000:2018 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

Also, the following EC guidelines are fulfilled:

2011/65/EU
2015/863/EU

RoHS (category 9)
Delegated Directive (RoHS III)

Hofheim, 24 March 2022



H. Volz
General Manager



M. Wenzel
Proxy Holder